GOVERNMENT OF INDIA
SPACE
LOK SABHA

UNSTARRED QUESTION NO:3165
ANSWERED ON:16.03.2016
Forecasting of Natural Disasters
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Will the Minister of SPACE be pleased to state:

(a) whether any pilot project is running or is proposed in the country especially in the Himalayan regions to develop technology for forecasting natural disasters by Indian Space Research Organisation; and
(b) if so, the details thereof?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE (DR. JITENDRA SINGH):

(a) Yes Madam.

(b) Indian Space Research Organisation (ISRO) is carrying out the following pilot projects in the Himalayan region on experimental basis to develop methodology for enabling forewarning of natural disasters.

i. Heavy Rainfall/ cloud burst alerts for western Himalaya: Space Applications Centre (SAC) of ISRO has developed a model, for heavy rainfall / cloud burst alerts, which is being experimentally carried out for Uttarakhand and Himachal Pradesh regions. The information is made available on ISRO's MOSDAC (Meteorological & Oceanographic Satellite Data Archival Centre) website.

ii. Rainfall triggered landslide alerts for the Uttarakhand Region: An experimental early warning system for rainfall triggered landslides is developed for use along the pilgrimage route corridors leading to Gangotri, Badrinath and Kedarnath as well as along the Pithoragarh-Malpa route in Uttarakhand. The forewarning is generated based on the statistical relation between the terrain (geological, morphological) and temporal (primarily long term rainfall events) factors.

iii. Flood Early Warning System for Assam State: The North Eastern Space Applications Centre (NESAC) of ISRO has developed the Flood Early Warning System (FLEWS) as a Research & Development (R&D) project in Assam State in association with Assam State Disaster Management Authority (ASDMA). FLEWS, is a terrain-specific model, which employs satellite based inputs, in-situ data on rainfall and river discharge data at critical locations to provide advance information on flood events as an input to disaster preparedness. The FLEWS model is being used in all 25 flood prone districts of Assam.

iv. Snow-melt run-off: ISRO has developed snow melt runoff models for Alaknanda, Bhagirathi, Yamuna, Sutlej, Beas and Chenab basins to provide information on short-term (16 day) snow melt runoff during summer months i.e. April to June.

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